

# Filtered & Light Cigarettes

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# Terminology

- “Cessation”
- “Cigarette-related”
- “Tar”
- “Puff”

# Cigarette Design Change

- Cost savings
- Increase addictiveness
- Increase dosing flexibility
- Beat the test method
- Support marketing claims
- Toxin delivery reductions

# Relationship of Nicotine & “Tar”

- Industry contention that cigarettes are designed to a specific “tar” delivery and that nicotine yield passively follows this
- Industry documents reveal concern for “elasticity”
- FDA’s analysis of FTC numbers over time showed Nicotine:Tar has **increased** over the years

# Byrd studies

- Byrd I, ....., in your materials
  - orderly reduction in nicotine absorption across FTC categories
- Byrd II, Psychopharmacology, 1998
  - small difference between highest category and the others but no difference between the lower three categories

# Eclipse vs Market “Ultra Low”

<u>(FTC conditions)</u>	<u>Eclipse</u>	<u>“Ultra Low”</u>
• Nicotine, mg	0.2	0.1
• Acetaldehyde, $\lambda$ g	54	47
• Acrolein, $\lambda$ g	19	2
• Benzo(a)Pyrene, ng	0.7	0.8
• NNN, ng	10	12
• NNK, ng	12	10

– Source: Borgerding MF, TCRC presentation, 1996

# Health Image vs Health-Oriented

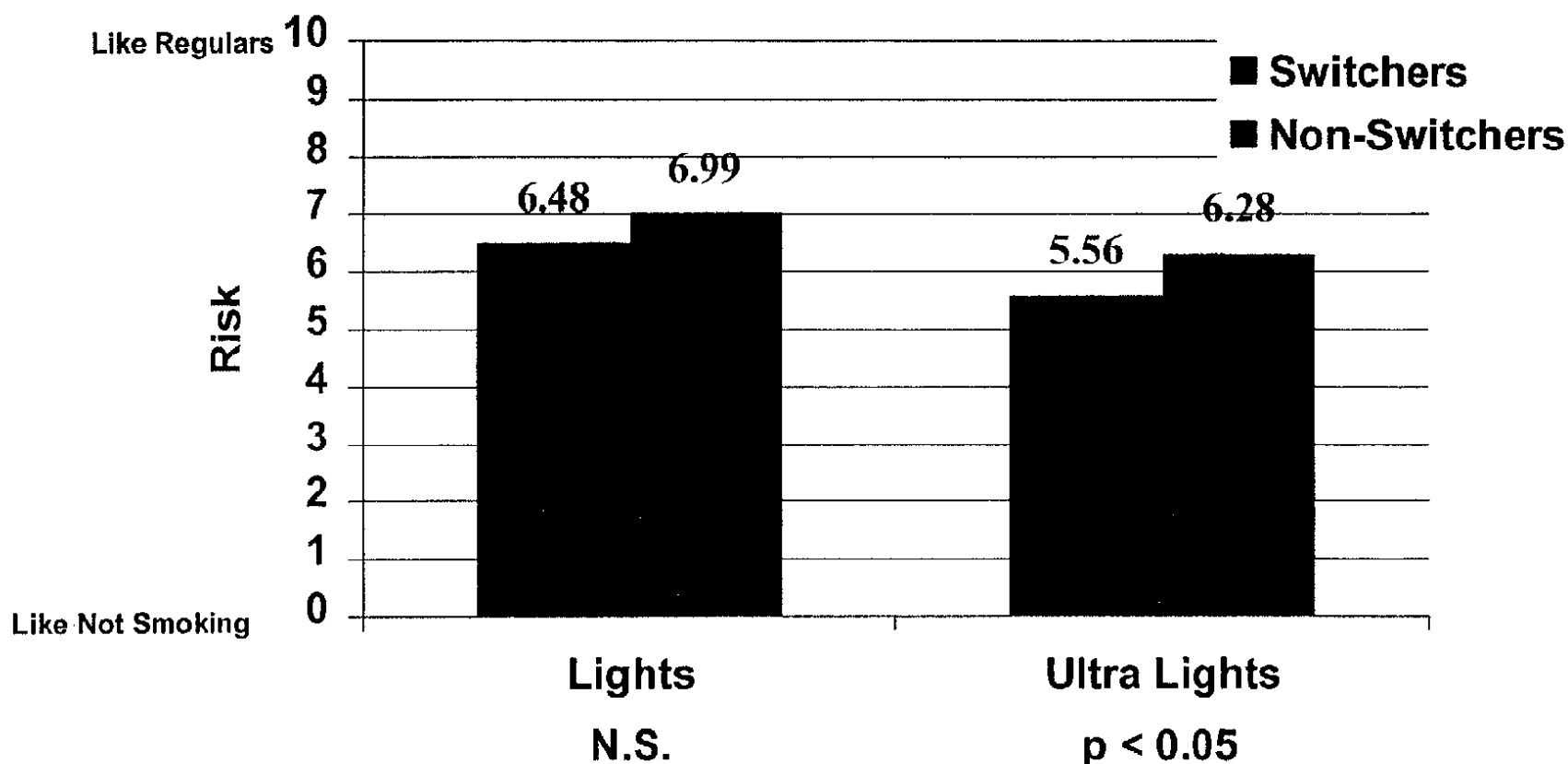
- *Health image (health reassurance cigarette)* such as a low tar-low nicotine cigarette which the public accepts as a healthier cigarette
- *Health-oriented cigarette* which has minimal biological activity; for example, one which would yield a near zero reading in a mouse skin painting test
  - Dr. R. A. Sanford, B&W, 1968

# Medical Response to “Low Tar”

- If your patient can't or won't stop smoking, at least encourage him to switch to a low tar cigarette.
  - Advice in most primary care textbooks until about 1983
  - Only disappeared in favor of abstinence only advice following dissemination of Benowitz study from NEJM on compensation



# Risk of Smoking Lights and Ultra Lights in Comparison to Regulars



\*Means adjusted for age, cigarettes per day, years smoked, quit attempts, and type of cigarette smoked

# Consumers Underestimate Risk of Smoking

- Only 29% of current smokers believe they have a higher than average risk of heart attack.
- Only 40% believe their risk of cancer is higher than average

– Ayanian & Cleary, JAMA 218:1019

# Thought Experiment

- How large would the cigarette market be today if tobacco companies had not been permitted to market king-sized, filtered or “low tar” cigarettes?
- The only products on the market would be 70 mm unfiltered cigarettes such as original Camel, Lucky Strike, Chesterfield, Old Gold, Marlboro and Home Run

# Modeling Public Health Effects of Low Tar Cigarettes

- Net benefit or harm a function of:
  - How much difference in toxicity from conventional products
  - Degree to which low tar is a bridge to quitting
  - Degree to which low tar keeps consumers in the franchise
- Explored in paper presented by Terza, Kozlowski, Erickson, Strasser, Giovino at SRNT 2/00

# What is the role for harm reduction?

- Harm reduction a complement to conventional prevention and treatment goals (abstinence)
- May be useful during transition to minimal population use of tobacco products
- At steady state, addresses “residual” tobacco use

# Goal for Conventional Prevention and Treatment

- Cigarette use by MDs in the US circa 5%
- Daily + Occasional cigarette use in Mass now 18% of adults
- Daily cigarette use alone in Mass now 14.7% in < 10 years of state program
- Consistent application of current treatment and prevention approaches should yield adult rates of about 5 - 10% cigarette use

# Role of Harm Reduction

- At steady state, harm reducing products should supply only the 5 - 10% of the population who continue to smoke with products that are no more toxic or addictive than necessary.
- Usage rates higher than this should, as a first approximation, be regarded as indicating unnecessarily extensive utilization of still harmful products.

# Studies pertinent to estimating the potential market for harm reduction products

- Smokers unlikely to ever quit: 5.2% of smokers in California
  - Emery et al, AJPH March 2000
- Rate of decline in smoking population will be slower than Healthy People 2010 objective projects
  - Mendez & Warner, AJPH March 2000



# Short-term Population Effects of “Harm Reduction” Products

- Follow cohorts of smokers and recent quitters in test and comparison areas for:
  - Smoking, quitting and relapse behavior
  - Knowledge & personal relevance of harms
  - Interest in, plans for abstinence
  - Brand choice, switching
  - Awareness of novel product marketing
  - Trial of novel product
  - Adoption of novel product

# Preliminary Thoughts on Claims

- Claim narrowly justified by data may still be misleading or not in the public interest
  - Other harms not remedied by the product improvement are difficult to weigh against the affirmative claim
  - Harm reduction will occur at different rates for different consequences, eg cancer, CV disease
  - A cancer prevention claim or implication should be discounted because of latency